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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/586,479

07/18/2006

Munehiro Kamiya

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OLIFF & BERRIDGE, PLC

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ALEXANDRIA, VA 22320-4850

EXAMINER

HYEON, HAE M

ART UNIT

PAPER NUMBER

2839

MAIL DATE

DELIVERY MODE

01/08/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/586,479	Applicant(s) KAMIYA, MUNEHIRO	
	Examiner Hae Moon Hyeon	Art Unit 2839	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 7-9 is/are rejected.
- 7) ☒ Claim(s) 4-6 and 10-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/18/06 & 12/04/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: The first page of the present specification is missing CROSS-REFERENCE TO RELATED APPLICATIONS.

Appropriate correction is required.

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The present title of the invention is too general. The claimed invention deals with a salient pole of a rotor having a chipped portion to provide a smaller torque ripple in one rotational direction of the rotor.

The following title is suggested: **A rotating electric machine producing different torque ripples in different rotational directions.**

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: **the rotating structure, the output shaft and the rotation shaft.**

Claims 1 and 7 recite two shafts, an output shaft and a rotation shaft. It is clear that the output shaft is rotated by the structure since claims 1 and 7 recite, "a structure capable of rotating

Art Unit: 2839

about an output shaft". However, it is not clear how the rotation shaft is rotated since claims 1-12 do not the structural relationship between the structure, the output shaft and the rotating shaft.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hedlund (US 4,748,362).

Hedlund discloses a rotating electric machine comprising a stator 33 and a rotor 38 having a plurality of salient pole portions (see Fig. 3), and each tip portion of the plurality of salient pole portions has a large chipped portion 59-64 at a corner on one side. Hedlund discloses, in column 4, lines 5-16, that the chipped portions 59-64 of the rotor's salient poles will give a lesser magnetic coupling to the stator poles than un-chipped portions 39-44 of the rotor's salient poles. Because the chipped portions 59-64 give a lesser magnetic coupling to the stator poles, it is inherent, in view of Figure 3, that the rotor 38 will cause smaller torque ripple in counter clockwise rotational direction than clockwise rotational direction. Although, Figure 3 only shows one rotational direction, Hedlund teaches in column 4, lines 53-59 that the rotor 38 can achieve both rotational directions with a three-phase motor. However, Hedlund does not disclose the rotating electric machine of Figure 3 to be used in vehicle.

Art Unit: 2839

It is common knowledge that a vehicle can use many different motors and a motor can be used in many different vehicles. Thus, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the rotating electric machine taught by Hedlund in a vehicle to provide the vehicle with forward and reverse directional movement.

Allowable Subject Matter

7. Claims 4-6 and 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hae Moon Hyeon whose telephone number is 571-272-2093. The examiner can normally be reached on Mon.-Fri. (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tulsidas C. Patel can be reached on (571) 272-2098. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2839

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hae Moon Hyeon/
Primary Examiner, Art Unit 2839

hnh